

REMARKS

Claims 1-3, 6, 7, 10, 12, 15-17, 19, 22, 24, 27-30, 32-34, 38-41, 43-46 and 49-54 are now pending in the application. Claims 1-3, 6, 7, 10, 12, 15-17, 19, 22, 24, 27-30, 32-34, 38-41, 43-47 and 49-52 stand rejected. Claims 8, 9, 13, 20, 23, 42 and 48 have been withdrawn from consideration. Claims 4, 5, 11, 14, 18, 21, 25, 26, 31, 35, 36, 37, 43, and 47 have been cancelled. Claims 1-3, 10, 16, 17, 24, and 49-53 have been amended to further define Applicant's teachings, while Claims 27, 29, 38-41 and 44-46 have been amended to correct minor informalities. Claim 54 is new. Bases for these amendments and the new claim can be found throughout the application, drawings and claims as originally filed, and thus, these amendments and the new claim, do not constitute new matter. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

ELECTION/RESTRICTION

Applicants thank the Examiner for the indication that Claim 47 now reads on the elected embodiment, and is no longer withdrawn from consideration, however, in light of the amendments to the pending claims, Applicants have cancelled Claim 47.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-3, 6, 7, 10, 12, 14-17, 19, 21, 22, 24, 27-36, 38-41, 43-47, and 49-52 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hutter (U.S. Pat. No. 5,704,747; hereinafter "Hutter") in view of Peterson (U.S. Pat. No. 5,096,350, hereinafter "Peterson"). This rejection is respectfully traversed.

Applicants note independent Claims 1 and 2 include a throughbore or bore including a flat countersink surface, and Claim 3 includes “the base including a flat countersink surface.” Further, Claims 1, 2, and 3 include “the transition portion having a transition minimum thickness greater than” a base minimum thickness (Claim 1) or body minimum thickness (Claim 2), or greater than both the base and body minimum thickness (Claim 3), as well as an integral member disposed around the base and defining “a first opening on a first surface and a second opening on a second surface.” Applicants further note Claims 10 and 16 include the bore including a flat countersink surface substantially spanning the transition portion. Claims 10, 16, 17 and 24 each include the bore including a flat countersink surface, and the transition portion having a transition minimum thickness greater than a base and/or body minimum thickness, as well as:

an integral cage having an upper surface and a lower surface, the integral cage defining an upper opening on the upper surface, a lower opening on the lower surface, and two pair of flanges bent to enclose at least a portion of the base...(emphasis added).

Additionally, Claim 24 further includes that the flat countersink surface is formed at the transition portion. Claim 24 also includes “the flat countersink surface having a first outer diameter which is greater than the first diameter.” Claim 49 includes “the base having a base minimum thickness, and the transition portion having a transition minimum thickness greater than the base minimum thickness, said transition portion defining a flat conical surface,” “the flat conical surface having a first outer diameter which is greater than the first diameter,” and:

a member operably allowing some movement of the nut associated therewith but limiting the movement of the nut by enclosing at least a portion of the base...(emphasis added).

Additionally, Claim 50 includes “the body having a constant body minimum thickness, and the transition portion having a transition minimum thickness greater than the body minimum thickness, said transition portion defining a flat conical surface,” as well as “a cage disposed about at least a portion of said base...” (emphasis added). Applicants further note that Claim 51 includes the “transition portion having a generally conical bore coaxial with the bore of the body,” and “the minimum thickness of the transition portion [being] greater than the minimum thickness of the base,” and Claim 52 includes “said bore defining a flat conical surface at the transition portion,” where “a wall minimum thickness of the transition portion is greater than a minimum thickness of the base and greater than a constant minimum thickness of the body.” In addition, both Claims 51 and 52 include:

a cage operable to enclose at least a portion of the base to restrict the motion of the nut, the cage defining a first opening on a first surface and a second opening on a second surface (emphasis added).

Claim 53 includes “said threaded bore having a second radius and countersink having a first outer radius smaller than or equal to the first diameter,” and “the base having a constant base minimum thickness...the body having a body minimum thickness, the transition portion having a transition minimum thickness greater than the body minimum thickness and the base minimum thickness,” as well as:

a means for regulating the movement of the body with respect to the hole by enclosing at least a portion of the base, and defining a first opening on a first surface and a

second opening on a second surface aligned with the hole
(emphasis added).

Applicants respectfully submit that at least these features as claimed are not taught singly by either Hutter or Peterson. Further, it is improper to combine Hutter with the teachings of Peterson, as Hutter teaches away from this combination. In addition, the combination of Hutter with Peterson would impermissibly modify the intended purpose and method of operation of the nut plate assembly of Hutter and is therefore improper.

Hutter discloses a floating nut element 18 surrounded by a closed dome 20 (see at least column 3, lines 31-35). As illustrated in Figure 1 of Hutter, the dome 20 is not disposed around a substantial portion of the base, as also noted by the Examiner. Hutter further does not disclose a member defining a first opening on a first surface and a second opening on a second surface as claimed. Rather, the dome 20 is positioned such that the nut 18 can float within the dome 20. The dome 20 further has a “radially outwardly extending rim 22 for adhesive mounting onto [a] blind side of the substrate 12” (see at least Column 3, lines 33-36). Hutter discloses that it is an object of his invention to “provide a structure and method for installing a protective liner sleeve without requiring separate riveted connection, and in a manner which permits the nutplate assembly to be adhesively mounted securely and firmly to the substrate,” a purpose accomplished by the dome 20 (emphasis added, see at least Column 1, lines 59-64).

In contrast, Peterson teaches a body 20 having a non-constant thickness disposed against a shim 50 in combination with a cage 30 to restrict a movement of the body 20 (see at least Col. 3, lines 3-18). The body 20 of Peterson does not have a bore

including flat countersink surface as claimed, rather the bore in the body 20 of Peterson has a curved radius, best shown in Figure 3. The cage 30 of Peterson is secured to the supporting structure by welding.

It is improper to modify Hutter with Peterson as Hutter teaches away from cages which require welding, by teaching the desirability of an adhesively mounted nutplate assembly, and a nutplate assembly that protects against damage to the supporting structure (see at least Col. 7, lines 39-40, and lines 59-64). Thus, Hutter teaches away from a mechanical connection such as welding, as the process of welding damages the support structure. Thus, one of ordinary skill would not be motivated to combine Hutter with Peterson to arrive at Applicant's claims herein.

Further, combining Hutter with Peterson would render the nutplate assembly of Hutter improper for its intended purpose, and accordingly, there is no suggestion to make this combination. Specifically, if proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900,221 USPQ 1125 (Fed. Cir. 1984) MPEP 2143.01. In particular, to modify Hutter with the welded cage of Peterson would impermissibly modify the intended purpose of the dome 20 of Hutter, which is to enable the nutplate assembly to be adhesively mounted to the support structure of Hutter. Thus, the combination of Hutter with Peterson is improper.

In addition, Applicants note modifying Hutter with the cage of Peterson would impermissibly change the principle of operation of the nutplate assembly of Hutter, and further renders this combination improper. In particular, if the proposed modification or

combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (C.C.P.A. 1959) MPEP 2143.01. As modifying Hutter with Peterson would prevent the nutplate assembly of Hutter from being adhesively mounted, it is improper to modify Hutter with Peterson.

Additionally, with regard to Claims 10 and 16, Applicants note that neither Hutter nor Peterson disclose a bore including a flat countersink surface substantially spanning the transition portion, or the spanning the entire transition portion, as claimed. Rather, Peterson discloses the curved radius spanning a mere portion of the transition portion. Accordingly, Applicants further submit neither Hutter nor Peterson teach at least these features of Claims 10 and 16.

Further, with regard to Claims 24 and 49, Applicants respectfully assert that neither Hutter nor Peterson disclose a flat countersink surface or a flat conical surface having a first outer diameter which is greater than a first diameter of the body. Rather, with regard to Hutter, as shown in Figures 1 and 7, the diameter of the countersink is smaller than the diameter of the floating nut element 18. With reference to Figure 3 of Peterson, the diameter of the curved radius is smaller than a diameter of the body 20. Accordingly, Applicants further submit neither Hutter nor Peterson teach at least these features of Claims 24 and 49.

Accordingly, in view of the above discussion, Applicants respectfully assert the Examiner has not presented a *prima facie* case of obviousness and as such, Applicants

respectfully request the Examiner to reconsider and withdraw the rejection of Claims 1, 2, 3, 10, 16, 17, 24, 49, 51, 52 and 53 under 35 U.S.C. § 103(a).

With regard to Claims 6, 7, 12, 15, 19, 22, 27-30, and 32-34, Applicants note these claims depend directly or indirectly from either independent Claims 1, 2, 3, 10, 16, 17, or 24 and, thus, should be in condition for allowance for the reasons set forth for Claims 1, 2, 3, 10, 16, 17, or 24 above. Accordingly, Applicants respectfully requests the Examiner reconsider and withdraw the rejections of Claims 6, 7, 12, 15, 19, 22, 27-30, and 32-34 under 35 U.S.C. § 103(a).

Claims 38-41, 44-46 and New Claim 54

With regard to Claims 38-41 and 44-46, Applicants note these claims now depend from new Claim 54. As new Claim 54 includes the “bore having a flat countersink surface,” “the flat countersink surface having a first outer diameter which is greater than the first diameter,” a “transition portion having a transition minimum thickness greater than the body minimum thickness and the base minimum thickness, as well as “an integral member enclosing a portion of the base,...[and] defining a first opening on a first surface and a second opening on a second surface.” As discussed previously with regard to Claims 1, 2, 3, 10, 16, 17, 24, and 49-53, neither Hutter nor Peterson singly teach these features as claimed, and further, it is improper to combine Hutter with Peterson to arrive at Applicants' claimed features. Accordingly, Applicants submit new Claim 54 is patentable and in condition for allowance. In addition, as Claims 38-41 and 44-46 depend from new Claim 54, these claims are also believed to be patentable and in condition for allowance. Accordingly, Applicants respectfully

requests the Examiner reconsider and withdraw the rejections of Claims 38-41 and 44-46 under 35 U.S.C. § 103(a).

Reconsideration and withdrawal of these rejections are respectfully requested.

CONCLUSION


It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Dated: May 30 - 2006

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